

forming an insulating layer over said first electrically conductive structure, said [conductive] insulating structure having an opening with sidewalls and a bottom and exposes a portion of said first conductive structure;

providing a gas comprised of hydrogen incorporated within a plasma into said opening in said insulating layer ; and

depositing a conductive material into said opening using chemical vapor deposition.

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22. The method of claim 21, wherein said gas is additionally comprised of helium.

23. The method of claim 21, wherein said gas is additionally comprised of argon.

24. The method of claim 21, wherein said conductive material is comprised of a metal selected from the group consisting of: aluminum, copper, titanium, and a combination thereof.

25. The method of claim 21, wherein said gas comprised of hydrogen incorporated within a plasma removed residue formed in said opening in said insulating layer.

Add the following claims:

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26. The method of claim 21 wherein said plasma has a plasma power of from about 150 watts to about 450 watts.

27. The method of claim 21 wherein said plasma has a bias power up to about 300 watts.

28. The method of claim 26 wherein said plasma has a bias power up to about 300 watts.

29. The method of claim 21 wherein said step of providing a gas into said opening is at a temperature of from about 100°C to about 450°C.

30. The method of claim 26 wherein said step of providing a gas into said opening is at a temperature of from about 100°C to about 450°C.